

5.0 Cumulative Impacts

This chapter addresses the potential for cumulative environmental impacts resulting from implementation of the on-site or off-site disposal alternatives and other past, present, and reasonably foreseeable future actions in the affected region.

Council on Environmental Quality regulations implementing the procedural provisions of NEPA require federal agencies to consider the cumulative impacts of a proposal (40 CFR 1508.25[c]). A cumulative impact on the environment is the impact that would result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7). This type of assessment is important because significant cumulative impacts can result from several smaller actions that by themselves do not have significant impacts.

The on-site and off-site alternative locations under consideration are located in rural areas with no major industrial or commercial centers nearby. In the Klondike Flats area, no past, present, or reasonably foreseeable future actions are anticipated to result in cumulative impacts when considered with the proposed alternative. However, other present and reasonably foreseeable future actions could result in cumulative impacts to the other sites when considered together with the on-site or off-site disposal alternatives. These actions are

- Seasonal tourism in and around Moab
- Widening of US-191 between Moab and Crescent Junction
- Planned Williams Petroleum Products pipeline project
- Ongoing activities at the White Mesa Mill site

These actions, and the potential for creating cumulative impacts, are addressed below.

5.1 Seasonal Tourism

Several national parks are in the vicinity of the Moab site and the off-site alternatives. Arches National Park is adjacent to the north border of the Moab site, and Canyonlands National Park is approximately 12 miles southwest of the site. In 2002, 765,000 visitor days were recorded at Arches National Park; 41,524 of that number included at least one overnight stay. Most of the land in the area is open to recreational uses, and tourism is an important part of the Moab economy. Favorable weather allows recreational access for hikers, bikers, and off-highway vehicle users and others in all seasons. The Colorado River adjacent to the Moab site is a source of extensive recreational use for spring and summer water sports. The land directly south of the Moab site is often used by campers and hikers throughout the summer. Activities at the Moab site, together with tourism, could have a significant cumulative impact on traffic congestion (e.g., increases in truck traffic as high as 186 percent; see Table 2–28) in central Moab and could have socioeconomic impacts related to available housing and public safety (police, fire, and hospitals).

5.2 Widening of US-191

US-191 is being upgraded to four lanes between Moab and the intersection of US-191 and SR-313. The upgrades also include adding two turn lanes at the entrance to Arches National Park, at Gemini Bridges, and at SR-313; adding a 2-mile-long bicycle lane on the northeast side of US-191; and adding center divides along some stretches of the highway. Because these upgrades are planned to be completed in 2004, it is unlikely that this highway construction project and the transport of uranium mill tailings from the Moab site would result in cumulative impacts.

5.3 Williams Petroleum Products Pipeline Project

The Williams Petroleum Products pipeline project is a recently approved project that will extend from Bloomfield, New Mexico, to Salt Lake City, Utah. The pipeline project includes (1) converting approximately 220 miles of an existing natural gas pipeline system to transport refined petroleum products from Bloomfield to Crescent Junction and (2) constructing approximately 260 miles of new refined petroleum product pipeline extending west from Crescent Junction to a terminal just north of Salt Lake City. The Williams pipeline project was approved by BLM in a ROD signed October 12, 2001; however, construction has not begun because of ongoing litigation (Mackiewicz 2003). This pipeline project will include aboveground and underground facilities near the proposed Crescent Junction disposal site.

The purpose of the Williams pipeline project is to transport refined petroleum products from northwest New Mexico to intermediate storage locations at Crescent Junction and Nephi, Utah, and ultimately to a terminal north of Salt Lake City, where the petroleum products can be distributed to markets in Utah and western Colorado. The pipeline project is being designed to transport up to 75,000 barrels per day of gasoline, diesel, and jet fuel (a barrel of petroleum contains 42 gallons). The project involves

- Converting 220 miles of existing 10- and 12-inch-diameter natural-gas pipelines to transport refined petroleum products from Bloomfield to a proposed terminal east of Crescent Junction
- Constructing a new 12-inch refined-petroleum pipeline on a 50-ft-wide right-of-way extending from the new Crescent Junction terminal to a terminal with existing refineries in the north Salt Lake City area
- Constructing new product terminals consisting of storage tanks and truck-loading facilities at Crescent Junction and Nephi

The portion of the project between Bloomfield and Crescent Junction is further outlined below because this segment of the pipeline project could lead to future interactions with the disposal of mill tailings at the Crescent Junction site alternative.

The 220-mile, 10- and 12-inch conversion segment extends north from Williams Kutz Pump Station near Bloomfield to the proposed Crescent Junction terminal near the US-191/I-70 junction. The existing 10- and 12-inch pipelines currently carry natural-gas products. These pipeline segments will be retrofitted by installing 43 motor and manual valves that can be used to shut down the pipeline in the event of a large leak or failure. In addition, a new pump station will be built on approximately 4 acres near DOE's proposed Crescent Junction site. The existing

pipeline segments to be converted will be used in their present condition once the valves, end piping, and pump stations are completed. Because these sections already comply with current pipeline safety requirements, they are not subject to hydrostatic testing or inspection in association with the proposed change in service (DOI 2001). The existing pipelines are situated within an existing utility corridor that includes several other utility lines, including natural gas pipelines and electric transmission lines.

The new 12-inch pipeline segment will extend from the proposed Crescent Junction terminal to an existing terminal north of Salt Lake City. Proceeding west from Crescent Junction, the first 98 miles of new pipeline will be installed within a new 75-foot-wide construction right-of-way generally running parallel to an existing utility corridor. The construction right-of-way will revert to a 50-foot-wide permanent right-of-way after surface rehabilitation. This section of new pipeline will cross the Green River once and the Price River twice. The remaining sections of new pipeline extending from Price to the Salt Lake City area will also lie within existing utility corridors. These pipeline sections are not discussed further because these areas are a considerable distance from the actions associated with the Moab project.

The Crescent Junction terminal will be constructed on a 65-acre tract of BLM-administered land in Section 26, T. 22 S., R. 19 E. This site is adjacent to existing railroad lines and just east of the US-191/I-70 junction. The terminal facility will include petroleum product storage tanks, a truck-loading rack, vapor combustion system, electrical substation, offices, and warehouse buildings, all to be situated within a 50-acre fenced area served by a new access road connecting to US-191. The terminal offices will house control equipment and serve as an office for station operations. A technician shop and product-testing laboratory building will also be constructed at this terminal facility. The total terminal tank storage capacity will be approximately 190,000 barrels. Tanks will include three gasoline storage tanks; two fuel oil storage tanks; individual storage tanks for gasoline mix, fuel oil mix, and butane; and one relief tank. All tanks will be enclosed within an earthen berm of sufficient height to contain 110 percent of the total contents of the largest tank. Initial products planned for truck loading and shipment include regular and premium unleaded gasoline and low-sulfur No. 2 fuel oil. Vapors produced during truck loading will be collected into a positive, closed-loop system and disposed of by combustion. Average throughput for truck dispatch is estimated to be approximately 10,000 barrels per day. On the basis of use of single trucks that can load 180 barrels per load, the expected truck traffic visits will likely range from 50 to 60 trucks per day.

The new pipeline will be built in three different pipeline construction spreads. The Crescent Junction-to-Price pump station spread is considered a high-production spread that will require about 90 to 150 workers. The new pipeline construction involves several sequences of construction, starting with clearing and grading and ending with placement of final erosion-control features and reclamation. After ground clearing and leveling, heavy equipment will be brought in to dig ditches. Ditches may be open several days until the pipe is placed and backfilled. Typical soil cover depth after placement will be approximately 3 ft or less in rocky terrain. Pump stations will be located adjacent to the right-of-way, and construction will involve the installation of pump equipment and piping. The pumps will be connected to the pipeline by lateral lines, and shutoff valves will be installed to isolate the pump stations from the pipeline in the event of an emergency. Construction of the Crescent Junction pump station will follow the same general construction procedures for the Crescent Junction terminal except that no large tanks or truck racks will be constructed. Approximately 20 to 50 workers will be needed to construct the proposed Crescent Junction pump station. Construction of the Crescent Junction

terminal will require a construction crew of 20 to 30 workers for initial site work and 40 to 60 workers for tank erection and installation of the mechanical and electrical facilities. The terminal will require an estimated 8 to 12 months to complete. Construction crews will consist of general contractors, heavy equipment operators, pipe welders, electricians, instrumentation specialists, millwrights, laborers, and quality assurance specialists.

The completed pipeline will be patrolled from the air every 3 weeks at a minimum and at least 26 times per year. Williams will employ a leak-detection system integrated with its SCADA monitoring system. To help prevent external corrosion leading to leaks, a protective coating will be applied to the exterior of the new pipeline segments, and cathodic protection will be used on all pipeline segments to help minimize corrosion.

The impacts of constructing and operating the Williams pipeline project, including increases in truck traffic and consequences of an accident, could result in cumulative impacts when considered together with the impacts of constructing a uranium mill tailings disposal cell at the Crescent Junction site alternative. Even if both DOE and Williams decide to implement these projects at the same time, the magnitude of potential traffic impacts would be small, as the extent of overlapping use of roadways within the Crescent Junction area would be a mile or less before Williams employees would merge onto I-70 and no longer compete with DOE traffic.

5.4 Ongoing Operations at White Mesa Mill

The White Mesa Mill site is a 5,415-acre parcel that is privately owned by IUC. On-site facilities consist of a uranium mill, uranium-ore storage pad, and four lined uranium mill-tailings disposal cells. Since 1997, the mill has processed more than 100,000 tons of uranium ore. Although mill operations and disposal of tailings from the Moab site would occur on the White Mesa Mill site, the two operations are not expected to result in cumulative doses to the workforces for each operation because there would be sufficient distance between the two operations. This expectation is based on the assumption that there would be two separate groups of workers: one group that would work exclusively on the IUC areas of the White Mesa facility and one group that would work exclusively on the disposal cell for the Moab tailings. For each group of workers, the radon and gamma dose would be predominantly from the tailings in their immediate vicinity, not from tailings located at a distance. For example, the radon dose from tailings in a person's immediate vicinity is about 10 times greater than the radon dose from tailings located in an adjacent cell. For gamma doses, the dose from tailings in a person's immediate vicinity is more than 10 times greater than the gamma doses from tailings located in an adjacent cell.

If IUC decides to expand its operations at the White Mesa Mill site, this expansion would result in an increase in the disturbed area and a potential increase in the disturbance of cultural resources. Although expansion is unlikely given the foreseeable business climate and the available capacity in the existing disposal cells, an expansion of the facility, together with the potential use of approximately 346 acres for a disposal cell for the Moab tailings, could result in cumulative impacts to cultural resources.

5.5 References

40 CFR 1500-1508. Council on Environmental Quality, "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act."

DOI (U.S. Department of the Interior), 2001. *Final Environmental Impact Statement, Questar, Williams, and Kern River Pipeline Project*, June.

Mackiewicz, M., 2003. Personal communication, M. Mackiewicz, BLM Realty Specialist, Price (Utah) Field Office, with G. Karriker, S.M. Stoller Corporation, July 25.

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